CLAIMS

1. A Cu-based amorphous alloy comprising 90 percent by volume or more of amorphous phase having a composition represented by Formula: $Cu_{100-a-b}(Zr,Hf)_a(Al,Ga)_b$ [in Formula, a and b are on an atomic percent basis and satisfy 35 atomic percent $\leq$ a $\leq$ 50 atomic percent and 2 atomic percent $\leq$ b $\leq$ 10 atomic percent], wherein the temperature interval ΔTx of supercooled liquid region is 45 K or more, the temperature interval being represented by Formula $\Delta Tx = Tx - Tg$ (where Tx represents a crystallization initiation temperature and Tg represents a glass transition temperature), a rod or a sheet having a diameter or thickness of 1 mm or more and a volume fraction of amorphous phase of 90% or more can be produced by a metal mold casting method, the compressive strength is 1,900 MPa or more, the Young's modulus is 100 GPa or more, and the Vickers hardness is 500 Hv or more.

2. A Cu-based amorphous alloy comprising 90 percent by volume or more of amorphous phase having a composition represented by Formula: $Cu_{100-a-b}(Zr,Hf)_a(Al,Ga)_b M_c T_d Q_e$ [in Formula, M represents at least one element selected from the group consisting of Fe, Ni, Co, Ti, Cr, V, Nb, Mo, Ta, W, Be, and rare-earth elements, T represents at least one element selected from the group consisting of Ge, Sn, Si, and B, Q represents at least one element selected from the group consisting of Ag, Pd, Pt, and Au, a, b, c, d, and e are on an atomic percent basis and satisfy 35 atomic percent $\leq$ a $\leq$ 50 atomic percent, 2 atomic

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percent $\leq$ b $\leq$ 10 atomic percent, $0 \leq c \leq 5\%$, $0 \leq d \leq 5\%$, $0 \leq e \leq 5\%$, and b + c + d + e $\leq$ 15 atomic percent], wherein the temperature interval ΔTx of supercooled liquid region is 45 K or more, the temperature interval being represented by Formula

5   ΔTx = Tx - Tg (where Tx represents a crystallization initiation temperature and Tg represents a glass transition temperature.), a rod or a sheet having a diameter or thickness of 1 mm or more and a volume fraction of amorphous phase of 90% or more can be produced by a metal mold casting method,

10   the compressive strength is 1,900 MPa or more, the Young's modulus is 100 GPa or more, and the Vickers hardness is 500 Hv or more.